Math 447 - Fall 2024 - Homework 12

Published: Wednesday, October 30, 2024

Status - Reading Assignments:

Here are the reading assignments to be completed before the first one of this HW.

WMS (Wackerly, et al. Textbook):

Ch.1 - 4.10 (non optional parts), ch.6.1 – 6.4

MF447 lecture notes:

Ch.1 - 3, ch.4 (non optional parts), ch.5, ch.6 (strong students), ch.7 - 12.3

Other:

Nothing assigned yet

New reading assignments:

Important: Work through the examples of the reading assignments! This is particularly important for the material starting at MF ch.10 and WMS ch.4!

Reading assignment 1 - due Monday, November 4:

a. Carefully read WMS ch.5.1 – 5.8. You already have encountered the theory in MF ch.12.1 – 12.2. Work the examples!

Reading assignment 2 - due Wednesday, November 6:

a. Carefully read WMS ch.5.9., skim WMS ch.5.10, extra carefully read WMS ch.5.11. You already have encountered the theory in MF ch.11. Work the examples!

Reading assignment 3 - due Friday, November 8:

a. Carefully read MF ch.12.4. Work the examples! Very relevant for graded assignments!

b. Carefully read WMS ch.6.5 – 6.7. Ch.6.6 is NOT OPTIONAL! Work the examples!

General note on written assignments: I will not collect those assignments for grading but doing them might be helpful for your quizzes and exams.

(a) Write from memory the following definitions and compare them with the MF lecture notes:

- Repeat from HW 11, Conditional expected value and conditional variance:
  ⊡ $E[E[Y \mid X] = ?$ ⊡ Relationship between $Var[Y]$, $Var[Y \mid X]$, $E[Y \mid X]$ is WHAT?
- The cookbook methods of MF ch.12 and WMS ch.6

(b) Again: Do the fully worked examples!

(c) All WMS exercises below are odd-numbered, so the solutions are in the book.

- WMS ch.5.2 exercises: #5.1, 5.3, 5.5, 5.7, 5.11, 5.15
- WMS ch.5.3 exercises: #5.19, 5.21, 5.23, 5.25, 5.33,
- WMS ch.5.4 exercises: #5.45, 5.51, 5.63, 5.71,